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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:	Mitsuro Unno et al.
Serial No.:	10/679,821
Filed:	October 6, 2003
For:	MOTOR PROTECTOR PARTICULARLY USEFUL WITH HERMETIC ELECTROMOTIVE COMPRESSORS
Art Unit:	2835
Examiner:	Anatoly Vortman

January 5, 2006

BRIEF FOR APPELLANTS

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Transmitted herewith is a brief in support of an appeal in the above identified application.

Please charge the fee for this brief to the Deposit Account of Texas Instruments Incorporated, Account No. 20-0670, and any further fees, or credit overpayment to Deposit Account No. 20-0670. An original and two copies of this sheet are enclosed.

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 today.

1/5/06
Russell E. Baumann Date

Respectfully submitted,

Russell E. Baumann
Registration No. 27, 418
(508) 236-3314
Customer No. 25946

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Dear Sir:

This is an Appeal to the Board of Appeals from the Final Rejection mailed September 22, 2005 of claims 6-16. Claims 1-5 have been allowed in this case. Please charge the fee of $500.00 for filing this Brief to Texas Instruments Incorporated Deposit Account No. 20-0670 and any further fees, or credit overpayment to Deposit Account No. 20-0670.

(1) Status of Claims

Claims 6-16 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claims 6 and 11 stand rejected under 35 U.S.C. 102 (b) as being anticipated by US Patent 5,167,241 to Ubukata et al. Claims 1-5 have been allowed in the case.

(2) Status of Amendments

A telephone interview was held and a Response After Final Rejection was filed and the claims remain as rejected in the Final Rejection mailed September 22, 2005.

(3) Real Party of Interest

Texas Instruments Incorporated is the assignee of this application and the real party of interest.

(4) Related Appeals and Interferences

There are no related appeals or interferences concerning this application.

(5) Summary of Invention

The invention relates to having a metal header (30) that mounts a first terminal (31) and a second terminal (32) electrically isolated from one another. A metallic housing (10) is fixed to the header to form a chamber therein. A stationary contact (40) is electrically connected to the first terminal (31), a heater (50) is electrically connected between the second terminal (32) and the header (30), and an arm assembly (60) is arranged inside the chamber, with an end thereof being fixed to the housing. The arm assembly (60) includes an electrically conductive movable plate (70) having a movable contact (77) mounted thereon engageable with the stationary contact (40), a thermally responsive member (80) arranged to lie under or over the movable plate (70) and an electrically conductive slug that fixes the movable plate (70) and thermally responsive member (80) to the housing (10).

(6) Issues

The issues present for review are whether claims 6-16 were properly rejected under 35 U.S.C. 112, first paragraph, as failing to comply with enablement requirements, and whether claims 6 and 11 were properly rejected under 35 U.S.C. 102 as being anticipated by US Patent 5,107,241 to Ubukata et al.

(7) Grouping of Claims

Appellants assert that claims 6-16 are patentable separately for the reasons set forth below in this brief.

(8) Argument

The References

US Patent Number 5,107,241 to Ubukata et al. was applied in rejecting the appealed claims 6 and 11.

The Ubukata et al. reference shows a thermal motor protector using two terminals (4, 5) mounted in a housing (1, 6). One of the terminals has a fixed contact support (21) attached thereto on which a stationary contact (21a) is mounted. The other terminal has a thermally responsive element support (7) attached thereto to which fixing strip (19) is attached for mounting thermally responsive element (16) with movable contact (16a) secured thereon for making contact with the stationary contact. Additionally, an arc barrier (17) is employed between the element (16) and the contact (16a) for protecting element (16) against arcing between the stationary contact and movable contact in operation.

The Rejection

The Examiner contends that claims 6-16 do not meet the enablement requirements under 35 U.S.C. 112, first paragraph. He states "The claims contain subject matter which was not described in the Specification in such a way as to enable one skilled in the art to which it pertains, or which it is most nearly connected, to make and/or use the invention." Claim 6 recites: "said movable plate being the primary current carrying member between said stationary member and said movable contact." The Specification does not support the aforementioned limitations. The Specification does not discuss the issue of the current distribution between said movable plate and the snap acting thermally responsive member. On the contrary, according to the figures (see for example Fig.15), the movable plate (131) and the snap acting thermally responsive member (80) are connected electrically in parallel; and, therefore, will split the electrical current between the stationary member (90) and movable contact (77) substantially equally."

Appellants respectfully request that this rejection be withdrawn. It is maintained that the requirements of 35 U.S.C. 112, first paragraph, have been met, and one skilled in the art would be enabled to make and/or use the invention.

The limitation in the claim 6 is "said movable plate being the primary current carrying member between stationary member and said movable contact." Paragraphs 0008, 0009, 0057 and 0058 of the Specification clearly set forth respectively that: (i) "the thermally responsive member of the protector is not in the main circuit path" (paragraph 0008); (ii) "the thermally responsive member is loosely fitted inside the window" (paragraph 0009); (iii) "the current path is formed between pin 31 and pin 32 through stationary contact 40, movable plate 70, housing 10, header 30 and heater 50, thereby supplying power to the motor" (paragraph 0057); and (iv) "bimetal disc 80 has its base part 81 fixed in cantilever fashion as described earlier with its tip 83a being freely or loosely inserted in the window" (paragraph 0058). These descriptions in the Specification show that for a preferred embodiment of this invention the thermally responsive member/bimetal disc is not designed to be or can be the primary current carrying member of the device between the stationary member and said movable contact member. Certainly it can or will carry current in certain instances in parallel with the movable plate but not as the primary current carrying member. Just because certain of the figures show the parallel relationship between the movable plate and thermally responsive member, it in no way means that the current is equally divided between the two specifically when the Specification dictates otherwise. That is, the current path that is formed between pin 31 and pin 32 of the protector of the present invention is through stationary contact 40, movable plate 70, stationary member 90/housing 10, header 30 and heater 50; and the thermally responsive member is not part of the main circuit path. Additionally, the thermally responsive member is loosely/freely fitted inside the window of the movable plate, further showing that it would not be part of the primary/main current path as it would provide in operation inconsistent current continuity.

Accordingly, Appellants respectfully maintain they have met the enablement requirements and the rejection under 35 U.S.C. 112, first paragraph, is improper and should be overturned.

The Examiner contends that claims 6 and 11 are anticipated by U.S. Patent 5,107,241 to Ubukata et al. under 35 U.S.C. 102 (b). Regarding independent claim 6, the Examiner stated "Ubukata discloses a protector (Fig. 9) comprising a metal header (1) that secures a first terminal (5) and a second terminal (4) electrically isolated from one another and from the metal header (by insulating members (2, 3), a metal housing (6) secured to the header (1) forming a chamber, a stationary contact (21, 21a) electrically connected to the first terminal (5), a heater (22) electrically connected to the second terminal (4) and to the header (1) (at 22a) and an arm assembly (7, 8, 16-20) arranged in the chamber, the arm assembly including an electrically conductive movable plate (17) mounting a movable contact (16a) engageable with the stationary contact (21, 21a), a snap acting thermally responsive member (16) movable between oppositely dished configurations at selected temperatures arranged to lie along the movable plate (17), and an electrically conductive stationary member (19) that secures the movable plate (17) and thermally responsive member (16) to the housing (6).

Appellants respectfully maintain this rejection is improper and should be overturned.

As the Examiner states, the Ubukata et al. reference does generally show a protector having a metal header (1) that secures a first terminal (5) and a second terminal (4) specifically isolated from one another and from the switch header (1), a metal housing (6) secured to the housing (1) forming a chamber, a stationary contact (21, 21a) electrically connected to the first terminal (5), a heater (22) electrically connected to the second terminal (4) and to the header (1).

It is respectfully submitted that the reference does not disclose an arm assembly as described by the Examiner and claimed in the present invention. In the cited reference, there is no electrically conductive plate having the movable contact mounted thereon. As described in column 4, lines 59 through the end of the page, and to column 5 at the top of the Ubukata reference, movable contact 16a is mounted on thermally responsive member 16. Item 17 (which the Examiner states is the electrically conductive plate) is an arc barrier positioned between thermally responsive element 16 and movable contact 16a for protecting the thermally responsive element 16 from arcing. Arc barrier 17 is only part of the circuit by the fact that it was sandwiched between the thermally responsive element 16 and contact 16a and is not a primary current carrying member between said stationary member and the movable member. In the Ubukata et al. reference, the thermally responsive element 16 is the primary current carrying member for the protector between said stationary member and the movable contract. The Examiner's position that the Ubukata et al. reference anticipates independent claim 6 is respectfully submitted as erroneous. Anticipation is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. See In re Paulsen, 30 F.3d 1475, 1480-1481, 31 USPQ2d 1671, 1675 (Fed. Cir. 1994) and In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990).

In view of the comments above, independent claim 6 is believed to be in condition for allowance, and it is respectfully submitted that the rejection by the Examiner should be overturned. Claim 11 depends from claim 6, and also should be in condition for allowance for the reasons set forth above for claim 6. Additionally, it is maintained that the Ubukata et al. reference does not anticipate claim 11 as it does not disclose the stationary contact design described therein.

It is noted that in the prosecution of this application, the Examiner indicated that claims 7-10 and 12-16, which depend from claim 6, contained allowable subject matter; and would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

Conclusion

For the reasons set forth above, reversal of the Final Rejection and allowance of claims 6-16 are respectfully submitted.

Respectfully submitted,

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MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 today.

Russell E. Baumann Date 1/5/06

Claims Appealed

6. (Presently Amended) A protector comprising a metal header that secures a first terminal and a second terminal electrically isolated from one another and from the metal header, a metal housing secured to the header forming a chamber, a stationary contact electrically connected to the first terminal, a heater electrically connected to the second terminal and to the header and an arm assembly arranged in the chamber, the arm assembly including an electrically conductive movable plate mounting a movable contact engageable with the stationary contact, a snap acting thermally responsive member movable between oppositely dished configurations at selected temperatures arranged to lie along the movable plate, and an electrically conductive stationary member that secures the movable plate and the thermally responsive member to the housing , said movable plate being the primary current carrying member between said stationary member and said movable contact.

7. (original) A protector according to claim 6 in which the movable plate and the thermally responsive member each have first and second ends, the first end being fixed in a cantilever fashion by means of the stationary member, a window being formed at the second end of the movable plate, the second end of the thermally responsive member being inserted into the window so that the movable plate is biased open by the thermally responsive member when the thermally responsive member snaps from one dished configuration to the opposite dished configuration.

8. (original) A protector according to claim 7 where the second end of the thermally responsive member is loosely received in the window.

9. (original) A protector according to claim 6 further comprising a protrusion formed on the movable plate, the protrusion functioning as a fulcrum when the thermally responsive member snaps from one configuration with the movable contact in engagement with the stationary contact to the opposite dished configuration.

10. (original) A protector according to claim 7 where an upstanding flange is formed on opposite sides of the movable plate.

11. (original) A protector according to claim 6 where said first and second terminals protrude through the header into the chamber and the stationary contact has a first part having a surface which can engage the movable contact, a second part having a cross section smaller than the first part, and a third part that extends from the second part, with the third part being fixed to the first terminal.

12. (original) A protector according to claim 6 in which the heater includes a first connective part, a second connective part including a main body and a fuse part whose cross section is smaller than the first connective part and the second connective part and main body, the first connective part being fixed to said second terminal, the second connective part being fixed to said header and a bend is formed in the main body between said first and second connective parts and in the fuse part.

13. (original) A protector according to claim 6 in which an opening is formed at the first end of the movable plate and the thermally responsive member, the stationary member includes a protuberant part that passes through each of the openings and the protuberant part is welded to the inner wall of the housing.

14. (original) A protector according to claim 6 in which the thermally responsive member includes a bimetal disc with a rib being formed at the second end of the bimetal disc.

15. (original) A protector according to claim 14 in which the rib includes a generally U-shaped configuration that protrudes from the surface of the bimetal disc.

16. (original) A protector according to claim 13 in which the first end the movable plate and the first end of the thermally responsive member are welded together, and the cross sectional area of the movable plate is reduced by the opening thereby

resulting in current generation of heat which is transmitted to the thermally responsive member.